Fig. 1
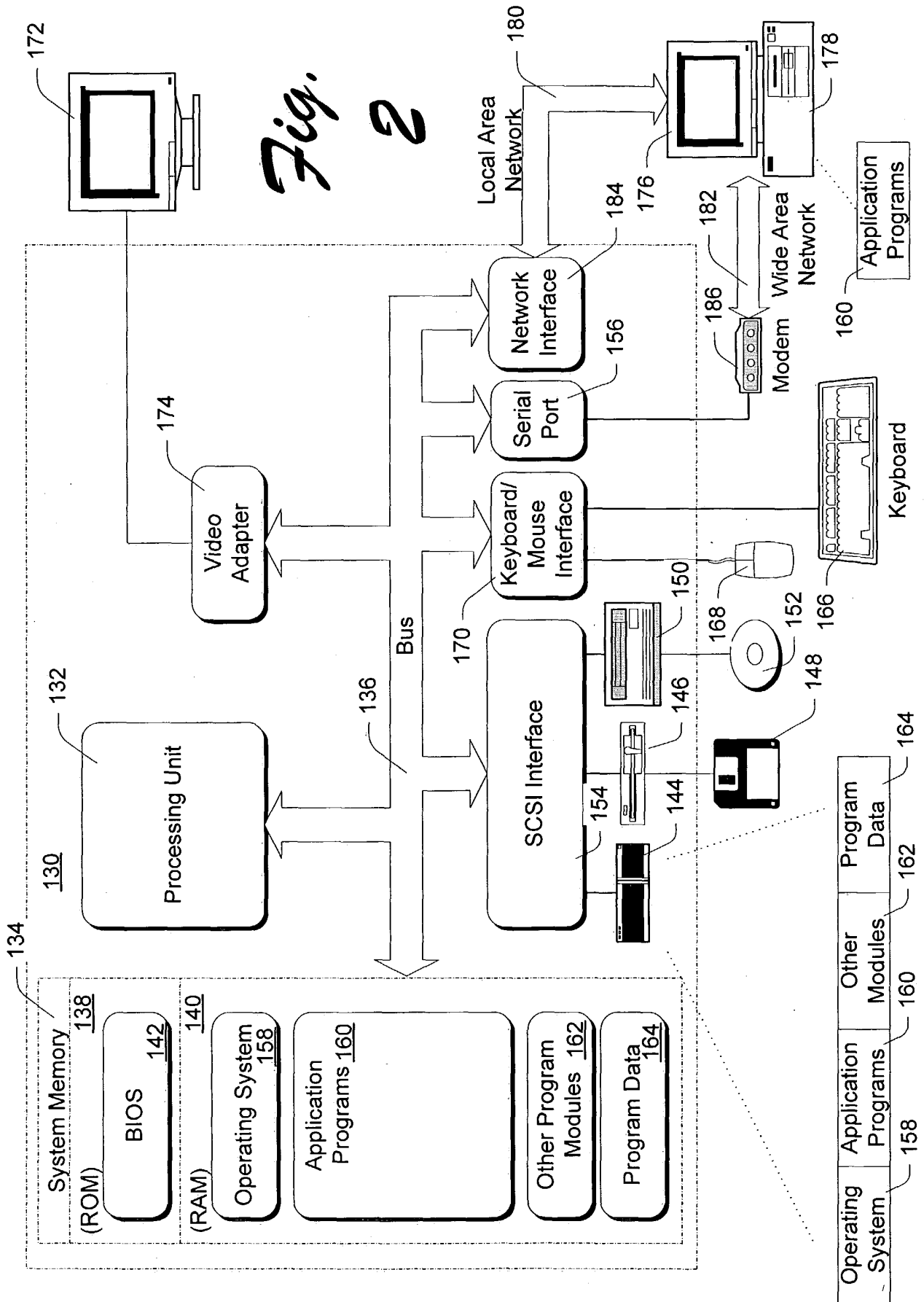
Fig. 2

Regular Expression Escape Characters:

+   – At least one or more of the preceding characters or expressions. For example, ba+c matches bac, baac, but not bc.

[ ]   – Any one of the characters contained in the brackets, or any of an ASCII range of characters separated by a hyphen (-). For example, b[aeiou]d matches bad, bed, bid, bod, and bud (but not bead or beed) and r[eo]+d matches red, rod, reed, rood, reod, roed, reood, roeod, etc.

^   – The beginning of a line

$ – The end of a line

*   – None or more of the preceding characters or expressions. For example, ba*c matches bc, bac, baac and so on.

[^]   – Any character except those following the caret (^) character in the brackets, or any of an ASCII range of characters separated by a hyphen (-). For example, x[^0-9] matches xa, xb, xc, and so on, but not x0, x1, x2, and so on.

( )   - Indicates a tagged expression to retain for replacement purposes. Each occurrence of a tagged expression is numbered according to its order and its replacement expression is \n, where 1 corresponds to the first tagged expression, 2 to the second, and so on.

( )\:n   – *(n is an integer between 1and 255)* Indicates a tagged expression (as above) that needs to be used as the nth-input parameter for an external LookUp() function.

{c!c}   – Any one of the characters separated by the alternation symbol (\!). For example, {j!u}+fruit matches jfruit, ufruit, jjfruit, ujfruit etc.

{ }   – Any sequence of characters between the escaped braces. For example, {ju}+fruit matches jufruit, jujufruit but not ufruit, jfruit or ujfruit

\:a   – Any single alphanumeric character [a-zA-Z0-9]

\:c   – Any single alphabetic character

\:d   – Any decimal digit [0-9]

\:z   – Any unsigned decimal integer [0-9]+

\:h   – Any hexadecimal number [0-9a-fA-F]+

\:w   – Any alphabetic string [a-zA-Z]+. The string need not be bounded by white spaces or appear at the beginning or the end of a line

\:q   – Any quoted string {"[^"]*!'[^']*'}

\N   – (*N is a digit*) The sub-string in the target that matched the nth-tagged expression

\   – Escape character to remove the pattern match characteristics from the special characters listed above. For example, 100$ matches 100 at the end of a line, but 100\$ matches the character string 100$ anywhere on a line.

Fig. 3

100

102

RECEIVE INPUT URL STRING
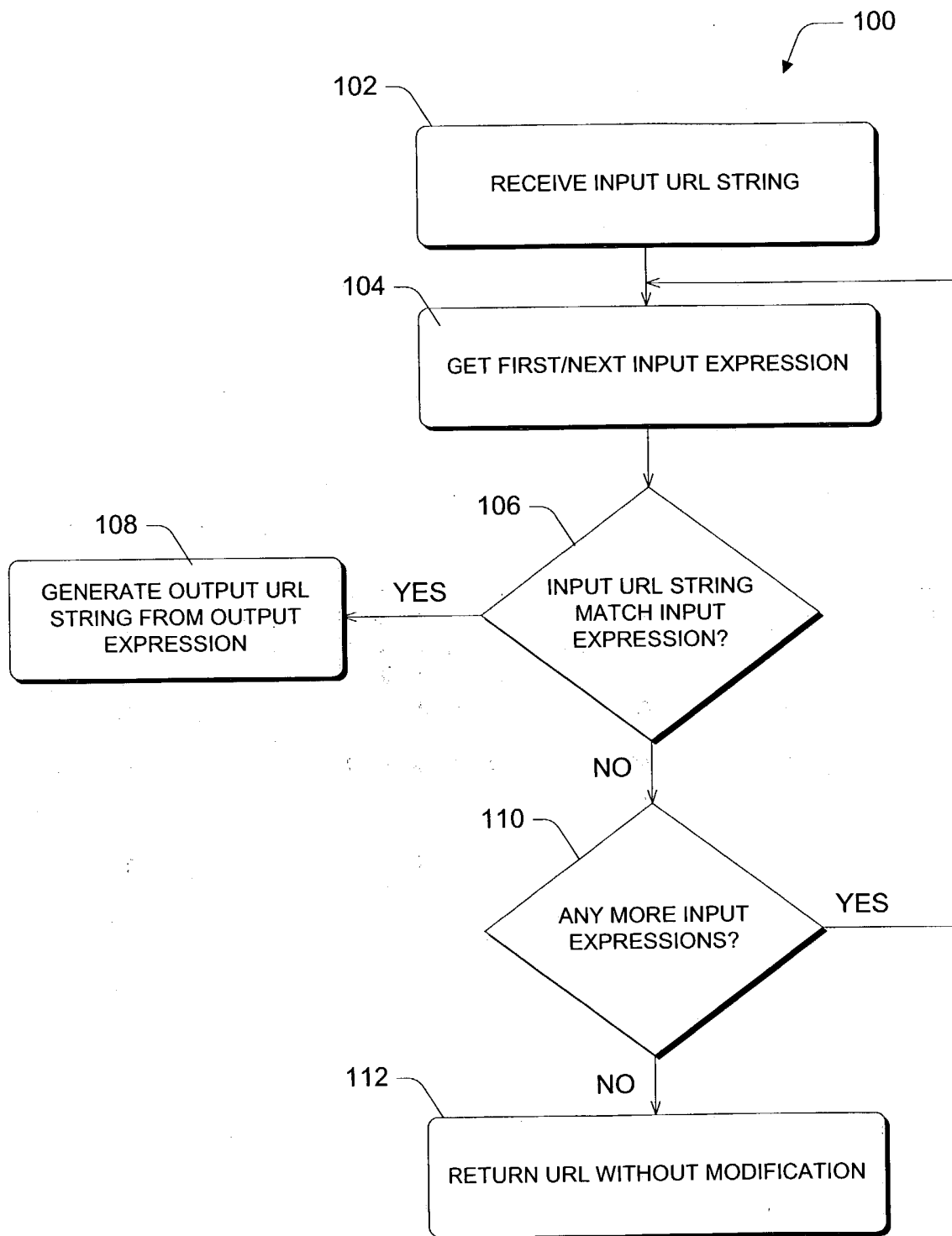
104

GET FIRST/NEXT INPUT EXPRESSION

106

INPUT URL STRING MATCH INPUT EXPRESSION?

108

YES

GENERATE OUTPUT URL STRING FROM OUTPUT EXPRESSION

NO

110

ANY MORE INPUT EXPRESSIONS?

YES

NO

112

RETURN URL WITHOUT MODIFICATION

Fig. 4

Group ID = 1, Group Tag = Match One, Group bit-mask = 0x01

Rule ID	Rule Action Type	Input Expression	Output Expression
1	N	^Sidewalk.com/([^/]+)	/scripts/city.dll?city=\1
2	N	^Sidewalk.com:/([^/]+)	/scripts/city.dll?city=\1
3	N	^Sidewalk.com:80/([^/]+)	/scripts/city.dll?city=\1
4	N	^([^.]+)/([^/]+)	/scripts/city.dll?city=\2
5	N	^([^.]+):/([^/]+)	/scripts/city.dll?city=\2
6	N	^([^.]+):80/([^/]+)	/scripts/city.dll?city=\2
7	N	^([^.]+).sidewalk.com	/scripts/city.dll?city=\1
8	N	^([^.]+).sidewalk.com:	/scripts/city.dll?city=\1
9	N	^([^.]+).sidewalk.com:80	/scripts/city.dll?city=\1
10	N	^Www.([^.]+).sidewalk.com	/scripts/city.dll?city=\1
11	N	^Www.([^.]+).sidewalk.com:	/scripts/city.dll?city=\1
12	N	^Www.([^.]+).sidewalk.com:80	/scripts/city.dll?city=\1

Fig. 5

Group ID = 2, Group Tag = Match One, Group bit-mask = 0x02

Rule ID	Rule Action Type	Input Expression	Output Expression
1	N	/$	&LID=1
2	N	/link/(\z)$	&LID=\1
3	N	/link/(\z)/$	&LID=\1
4	N	/link/(\z)/(\w)$	&\2&LID=\1
5	N	/link/(\z)?(\w)$	&\2&LID=\1
6	N	/detail/(\z)$	&EID=\1
7	N	/detail/(\z)/$	&EID=\1
8	N	/detail/(\z)/(\w)$	&\2&EID=\1
9	N	/detail/(\z)?(\w)$	&\2&EID=\1
10	N	/([^/]+)\:1$	&EID=\(frlkup, 1)
11	N	/([^/]+)\:1/$	&EID=\(frlkup, 1)
12	N	/([^/]+)\:1/(\w)$	&\2&EID=\(frlkup, 1)
13	N	/([^/]+)\:1?(\w)$	&\2&EID=\(frlkup, 1)

Fig. 6

Rule ID	Rule Action type	Input Expression	Output Expression
1	N	`^Sidewalk.com/([^/]+)\:1`	`city.dll?scopeid=\(scope, 1)`
2	N	`^Sidewalk.com:/([^/]+)\:1`	`city.dll?scopeid=\(scope, 1)`
3	N	`^Sidewalk.com:80/([^/]+)\:1`	`city.dll?scopeid=\(scope, 1)`
4	N	`^([^.]+)/([^/]+)\:1`	`city.dll?scopeid=\(scope, 1)`
5	N	`^([^.]+):/([^/]+)\:1`	`city.dll?scopeid=\(scope, 1)`
6	N	`^([^.]+):80/([^/]+)\:1`	`city.dll?scopeid=\(scope, 1)`
7	N	`^([^.]+)\:1.sidewalk.com`	`city.dll?scopeid=\(scope, 1)`
8	N	`^([^.]+)\:1.sidewalk.com:`	`City.dll?scopeid=\(scope, 1)`
9	N	`^([^.]+)\:1.sidewalk.com:80`	`City.dll?scopeid=\(scope, 1)`
10	N	`^Www.([^.]+)\:1.sidewalk.com`	`City.dll?scopeid=\(scope, 1)`
11	N	`^Www.([^.]+)\:1.sidewalk.com:`	`City.dll?scopeid=\(scope, 1)`
12	N	`^Www.([^.]+)\:1.sidewalk.com:80`	`City.dll?scopeid=\(scope, 1)`

Fig. 7